Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A system for dispatching and controlling of generation of an electric power system consisting of a plurality of power units, said system for dispatching and controlling of generation comprising a computer with a specified dispatching optimization module, said computer connected by communications means to the power units, characterized in that in the electric power system consisting of a plurality of subsystems each comprising a plurality of power plants provided with power units, said computer is a higher-layer computer and the specified dispatching optimization module is designed to determine parameters for an optimal interchange of power and energy between subsystems, wherein said controlling system further comprises a plurality of computers according to a number of subsystems, said computers being lower-layer computers each comprising a specified subsystem dispatch optimization module designed to determine parameters for an optimal dispatch of generation between power plants within a subsystem, and a unit for computation of functional characteristics for each subsystem, wherein each lower-layer computer is connected by lower-layer communications means to respective power plants of respective subsystems, and said dispatching and controlling system also comprises higher-layer communications means, wherein the lower-layer computers are connected to a higher-layer computer via the higher-layer communications means.

2. (Currently Amended) The system according to claim 1, characterized in that the higher-layer computer is designed to fulfill the following: to receive data on functional characteristics from the lower layer computers; to compute optimal power flows between the

subsystems, driving variables for a plurality of subsystems~~, wherein said variables for the plurality of subsystems are~~; and to send information on values of optimal power flows between the subsystems to the lower-layer computers.

3. (Original) The system according to claim 1, characterized in that the subsystem functional characteristic computation unit is designed to determine a relationship between subsystem boundary variables and subsystem Lagrange multipliers when optimality conditions for a subsystem dispatch of generation are met and internal constraints in the form of equalities and inequalities are observed.

4. (Currently Amended) The system according to claim 1, characterized in that the lower-layer communications means are provided as a telephone, digital communications, satellite or ~~Internet/Intranet~~ Internet/Intranet communications network.